

REVIEW SLOPE, SLOPE-INTERCEPT FORM, $\frac{1}{2}$ STANDARD FORM

$$m = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1}$$

Ex 1 FIND SLOPE FOR $(1, -1)$ & $(2, 3)$

$$m = \frac{3 - (-1)}{2 - 1} = \frac{4}{1} = 4$$

NOTE

IF slopes are equal, then the lines are parallel.

IF slopes are opposite reciprocals, then the lines are \perp .

SLOPE-INTERCEPT FORM

$$y = mx + b$$

↑ ↑
slope y-intercept

STANDARD FORM

$$Ax + By = C \quad m = -\frac{A}{B}$$

POINT-SLOPE FORM

$$y - y_1 = m(x - x_1)$$

slope: $\frac{1}{3}$ y-intercept: -5
 $y = \frac{1}{3}x - 5$

Write Ex 1 in $y = mx + b$

$$y - (-1) = 4(x - 1)$$

$$y + 1 = 4x - 4$$

$$y = 4x - 5$$

CHANGE TO STANDARD FORM

$$4x - y = 5$$

HOMEWORK:

PRACTICE MASTER

30-31

GRAPH

$$5(x - y) = 10$$

$$5x - 5y = 10$$

$$-5y = -5x + 10$$

$$y = x - 2$$

$$m = 1$$

$$b = -2$$

